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## ABSTRACT

### Antelope

The antelope populations in District Three are becoming stabilized and land-owner tolerance lessened by allowing uniform harvests by permittees.

### Bear

Population is low, providing little hunting.

### Deer

Hunter's choice harvests and mild winters have effected a better distribution pattern of deer and lessened winter losses. Many deer populations have increased above the carrying capacity of browse ranges and the animals have taken to open type ranges at low elevations making forbes and lesser growth type browse plants their principle forage. For this reason there is increasing antagonism with private landowners. In some areas adequate harvests have not been made due to availability of hunters.

### Elk

Due to the increased popularity of this species and the many open type ranges, this specie presents many management problems. Most populations are within carrying capacities of the range they inhabit. Sustained harvests may best be accomplished by issuing permits in some localities to maintain annual uniform harvests.

### Goats

An unexpectedly rapid rate of increase of mountain goats in the Crazy Mountains has the population past the point where hunting is a true sport. This is particularly true at the opening of the season when all permittees surge into this small area at once and drive the goats onto high precipitous slopes where they cannot be retrieved if shot or fall and ruin the head as a trophy. There is an urgent need to trap as many of these goats as possible in addition to hunter harvest.



Other goats in the district haven't been studied closely enough yet to determine the effects of two years of hunting.

The transplanted goats in the Spanish Peaks Wild Area are making slow progress in becoming established.

#### Moose

Moose populations within the District appear to be increasing with hunting. Several areas should be surveyed to acquire more data.

#### Sheep

Several small bands are in a stable state. The Spanish Peaks harvest appears to be beneficial from several aspects. Several areas give all appearances of potential transplanting sites.





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Investigations Project

Work Plan I

Job No. I-A

Title of Work Plan: Big Game Population and Range Studies

Title of Job: Antelope (Southern)

#### BEAVERHEAD RIVER AREA

##### 1. Aerial Antelope Census

<u>Area</u>	<u>No.</u>
Sage Creek	404
Medicine Lodge	227
Lima Area	150
Blacktail	123
Point of Rocks	66
Sweet Water	61
Argenta Flats	57
East Bench & McHessor Creek	43
Horse Prairie	23
Frying Pan Basin	17
Centennial	<u>16</u>

Total 1,089

The antelope in the Sweet Water area have decreased greatly in the last three years. The range is in poor condition and is heavily used by domestic sheep.

Realizing the competition between sheep and antelope it seems likely that the range condition is probably a main factor in the smaller number of antelope in this area.

There are five times as many antelope in the Medicine Lodge area this year then there were last year. The increase in number can be attributed to the migration of antelope from Idaho into Medicine Lodge through Sheep Creek Basin.



2. Aerial Elk Census in the Lima Hills

<u>Area</u>	<u>No.</u>
Spring Creek	141
Sawmill Creek	112
Little Sheep Creek	14
Garr Canyon	4
Deep Creek	4
Birch Creek	2
Dutch Hollow	<u>2</u>
Total	279

Of the elk censused the age-sex ratio was as follows:

Cows and calves	90%
Bulls	10% (6% mature, 4% spikes)

3. Aerial Elk Census in Pioneer Range-Vipond Park Area

<u>Area</u>	<u>No.</u>
Cattle Gulch	231
Quartz Hill	27
Dyce Creek	14
Dutchman Mountain	<u>5</u>
Total	277

Of the elk censused the age-sex ratio was as follows:

Cows and calves	93%
Bulls	7% (5% mature, 2% spikes)

4. Eighteen elk were counted on McCartney Mountain.

5. Aerial Elk Census in Medicine Lodge

<u>Area</u>	<u>No.</u>
Keystone Gulch & Lake Canyon	49

Age-sex ratio of this group:

Cows and calves	78%
Bulls	22% (one spike)

6. Aerial Elk Census in Bloody Dick Area

<u>Area</u>	<u>No.</u>
Hamilton & East Peterson	120
Buffalo Creek	52
Watson Creek	<u>13</u>
Total	185



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Title of Job: Antelope (Southern)

#### SAGE CREEK ANTELOPE MIGRATION STUDY

Of the 217 antelope trapped and tagged in Sage Creek Basin, Beaverhead County, in February of 1953, 22 tags have been returned. Fifteen of the tags were returned after the 1953 antelope season (see Vol. 5 No. 22). Seven were returned after the 1954 season.

The kill sites of the tagged animals were plotted on a map. The logical routes between the trap and the kill sites were established. These routes were also drawn in on the map. The map was brought up to date after the 1954 hunting season.

The migratory habits of this antelope herd can be summarized in this way:

Calculating from the aerial censuses conducted during the last three winters (1953, 1954 and 1955) from 73 per cent to 96 per cent of these antelope winter in Sage Creek Basin. Most of the remaining, winter in the hills near the mouth of Sage Creek or in the hills just north of Lima.

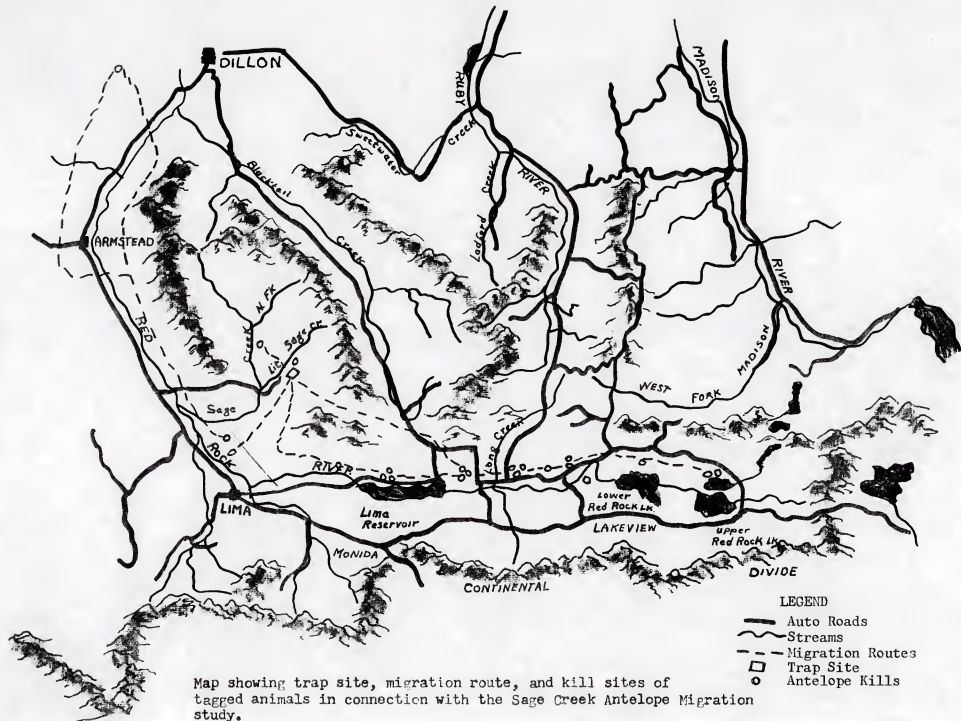
In the summer a few remain in Sage Creek (13 per cent of returns), but most of the herd migrate into the Centennial Valley. Sixteen tags (73 per cent of the tag returns) were from kills made in the Centennial. However, some of the animals remain in the hills or along the Red Rock River north of Lima (14 per cent of tag returns).

One return was from a kill made on the Argenta Flats. This animal was an old buck in poor condition. He had migrated in a direction opposite to the other antelope from which tags were taken (see map).

Sixteen antelope were stranded on a ridge in the North-Central portion of the Centennial during the winter of 1954-1955. The surrounding snow was









too deep to permit them to travel. They could not be found after the last heavy snows this spring. It is presumed that they starved.

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Job No. I-B

Title of Work Plan: Big Game Populations and Range Studies

Title of Job: Bear (Southern)

No work was done for this area on bear during this reporting period.

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eagle. Tracks showing where the deer had fallen down and slid down a snow bank suggested that she was in a weakened condition. Eagle tracks near the carcass and blood on the snow in two different locations indicated that the eagle had attacked her while she was still alive.

Deer No. 2 (young-sex?)

Marrow denoted starvation.

Deer No. 3 (young-sex?)

Marrow solid, evidently a road kill.

Observations of groups of deer along the roads and lower foothills indicated that they were only in fair condition. They seemed reluctant to jump fences and when they ran they did so without the usual springy bounce one associates with the running gait of a mule deer.

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Title of Job: Deer (Southern)

RUBY DEER HERD - 1954 HARVEST OCTOBER 15 THROUGH DECEMBER 31

The Ruby checking station checked out 360 deer during the hunting season.

Adult ♂	Adult ♀	Young ♂	Young ♀	Yearling ♂ Spikes	Total
175	91	36	29	29	360

Twenty-two per cent of the hunters in the Ruby area were successful in getting a deer in 1954 as compared to 36 per cent of successful hunters in 1953. The 1954 season was longer than the 1953 season by a margin of 20 days either sex. Even with the longer season there were 26 per cent less hunters in the area in 1954 than in 1953. The kill, 360 animals, was only 44 per cent of the 1953 kill of 813 animals. There was very little hunting pressure during the month of December. The early part of the winter was open, not much snow, and the deer remained high and on their summer range until late in the season.

The harvest was inadequate to reduce the deer to the carrying capacity of the range and there was some starvation again this spring despite an open winter.

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Work Plan I

Job No. I-E

Title of Work Plan: Big Game Population and Range Studies

Title of Job: Elk (Southern)

#### BLACKTAIL AREA

An aerial elk census was conducted along the Blacktail Ridge and in the Snow Crest Mountains. The census was conducted on February 20 and a recheck was made after a heavy snowfall in the first part of April.

The census, listed by areas, is as follows:

Middle Fork of Blacktail	328
Robb Creek-Ledford Creek	272
Long Creek-West Creek	159
South of Patch-Top Mt.	138
Blacktail Ridge	110
East Fork of Blacktail	42
West Fork of Blacktail	29
Clarks Canyon	<u>11</u>

Total	1,089
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Elk in the Long Creek-West Creek area and those in the Patch-Top Mountain area were included in this census because they are considered to be part of the same group of animals that comprise the Ruby-Blacktail herd.

#### Age-sex Ratio of Animals Censused

16% bulls (8% mature - 8% spikes)  
84% cows and calves

The 1954 census figure for the same area was 1,239.



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Title of Job: Elk (Southern)

#### BLACKTAIL-RUBY ELK HERD 1954 HARVEST

Checking station data on elk checked out through the Blacktail, Clover Creek and Ruby checking stations is as follows:

Checking Station	Adult ♂	Adult ♀	Young ♂	Young ♀	Spikes	Total
Blacktail	16	52	6	15	11	100
Clover Creek		14	3	2	2	21
Ruby	37	76	17	22	16	<u>168</u>
					Total	289

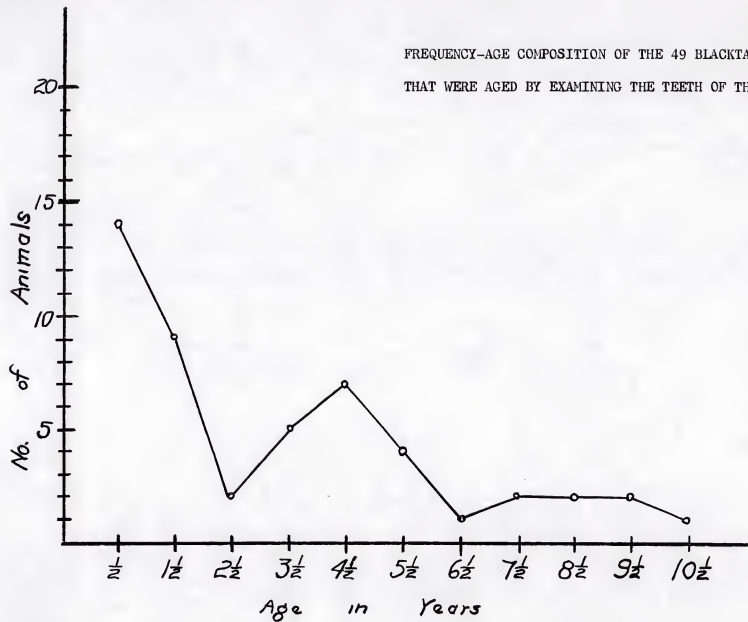
It is estimated that about another 50 animals were taken out of Clark's Canyon and Smallhorn Canyon on the west end of Blacktail Ridge. These animals would not pass through a checking station and so we can figure the total harvest at about 340 or 350 elk.

Using the Blacktail checking station data as a basis, 18 per cent of the hunters were successful in getting an elk.

Thirty-seven per cent of the elk harvested were males (18 per cent adult bulls, 10 per cent spikes, 9 per cent calves). Sixty-three per cent of the elk harvested were females (49 per cent cows and yearlings, 14 per cent calves).

Of the elk harvested 28 per cent could have been recognized from the air as bulls, however the sex ratio according to the aerial census this spring was







16 per cent bulls (8 per cent mature, 8 per cent spikes) a difference of 12 per cent. This might indicate that a comparatively greater number of bulls were being missed on the spring census. Although the material at hand is not sufficient to make these percentage figures significant as far as specific figures go; when the bulls are considered separately and not as a part of the herd there is a difference of 75 per cent in the number of bulls according to the checking station figures as compared to the census figures.

According to the checking station data 23 per cent of the herd were calves.

Hunters in the Blacktail area during the 1954 season were asked to bring the lower jaws from the animals they killed out to one of the checking stations. The response was not too good but with the animals examined in the field by Fish and Game personnel and the jaws brought out by hunters, the teeth of 49 animals were examined. This was done to get an idea of the age composition of the herd.

The jaws were aged from memory. The personnel doing the aging had previously studied a jaw board composed of jaws which had been compared to those of a known age group. Because a good part of the aging was done in the field from memory there is a margin for error in the age groups above  $3\frac{1}{2}$  years.

Age composition of the Blacktail-Ruby elk herd as figured from the 49 jaws examined, showed only two animals in the  $2\frac{1}{2}$  year old group. It must be remembered that the group of animals that were aged comprised less than 17 per cent of the animals checked out through the checking stations. There was also a tendency on the part of the hunters to bring the calves and yearlings out whole while more of the larger animals were quartered in the field and the head left behind.

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Title of Job: Elk (Southern)

# WISE RIVER - FLEECER AREA

## Aerial Elk Census

<u>Area</u>	<u>No.</u>
Fleecer Mountain	389
(Charcoal to Willow Creek)	
Bull Creek	90
Jerry Creek to Steel Creek	66
Warm Springs Creek	48
Willow Creek	40
Sheep Creek	16
Butch Hill	14
Pine Creek	13
Fox Gulch	<u>5</u>
Total	681

Age-sex ratio of censused animals was as follows:

Cows and calves	91%
Bulls	9% (6% mature, 3% spikes)

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Job No. I-G

Title of Work Plan: Big Game Populations and Range Studies

Title of Job: Goats (Southern)

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Work Plan I

Job No. I-M

Title of Work Plan: Big Game Population and Range Studies

Title of Job: Moose (Southern)

#### MOOSE INVESTIGATION

1. An aerial moose census in the Upper Centennial Valley was flown in April.

The March census showed 22 moose with 19 of these on the Red Rock Lakes Refuge.

The April recheck showed 26 moose with 24 of these on the Refuge.

Less snow than usual and a fairly open winter resulted in less moose congregating on the Refuge. There seemed to be quite a bit of movement back and forth between the Willow Creek-bottoms and the Refuge.

2. An aerial moose census was conducted in Horse Prairie. Fifty moose were observed.
3. An aerial moose census was conducted in the Grasshopper drainage. Sixty-five moose were observed.

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Job No. I-S

Title of Work Plan: Big Game Populations and Range Studies

Title of Job: Sheep (Southern)

No work was done for this area on sheep during this reporting period.

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